

Section 15 – Pepsi Sprintcars

15.1 DESIGN AND CONSTRUCTION

15.1.1 All phases of design and construction are subject to the approval of the Race Director and/or Tech Official. The Promoter and/or Race Director may exclude any car, design or construction, which they deem unsafe or not meeting the specifications, the spirit and/or the intentions of the rules contained herein.

15.1.2 Any component used in the construction or assembly of the chassis and/or accessories must be approved by Tech or addressed in the following rules.

15.1.3 All cars will have a working clutch and start under their own power at all times or;

15.1.4 May use 21 pound or heavier flywheel and no clutch to replace the transmission. Must have rearend disconnect. Must be able to self start. Flywheel must be completely covered.

15.1.5 **Weight Limit Rule:** 1750 lbs minimum and 60.00% left side weight with driver in driving position.

15.1.6 **Transmission:** Manual transmission or big bell in-out box must be used. A non-shifting custom design may be used. If second gear is used as main drive gear, a minimum 3/16" thick scatter shield must cover the transmission in a manner to protect driver. NO automatic transmissions or fluid couplers allowed. The revolving part of the drive shaft must be completely enclosed by a tubing w/.125" minimum thickness. The tube may move up and down with the rear end. Torque tube hoop or safety strap is required.

15.1.6 Jointed rear driveline is allowed, must meet tech approval..

15.1.7 **Brakes:** All four corners must be hydraulic foot operated and in good working order.

15.2 FUEL SYSTEM:

15.2.1 **Approved fuel cell or bladder is mandatory.** Metal housing for fuel cell is optional.

15.2.2 **No** aluminum fuel tanks. 10 gals or less recommended. Locking type threaded caps only. **No stock caps.** Cell must be strapped with metal straps or securely mounted to chassis. Left side nerf fuel cell must include steel braided fuel line to chassis, locking aircraft type fuel cap, minimum 1" O.D. .095 tubing specially designed to protect top and side impact, metal can/housing for fuel cell. One-way check valve must be installed on all fuel cells.

15.2.3 Stock 2 barrel 500 cfm Holley #4412 or Gas Comp # 4412. Choke plate must be removed for technical inspection. Must retain stock metering plate. May change jets and power valves for tuning. One (1") inch maximum spacer allowed. Pump fuel only.

15.2.4 Fuel pump may be electric or mechanical. Electric fuel pump **must** have oil pressure cut off switch.

15.2.5 Fuel line must have a ¼ turn shut off valve within easy reach of the driver, accessible from outside of the racecar is mandatory. **No** plastic or glass fuel filters. Fuel filters and fuel lines must be securely mounted. **No** ridged fuel lines.

15.3 CHASSIS AND BODY

15.3.1 All main roll cage and frame rails must be constructed of chrome moly steel tubing of at least 1 3/8" O.D. with a minimum wall thickness of .095", any other sizes must be equivalent in strength. Cage must extend at least 2" above driver's head. A halo bar may be required to meet dimensions. Diagonal braces in the balance of the cage must be of the same type of material but not the same O.D. The frame must be constructed so that the main, frame rails are inside the wheels. No lead weight filled tubing anywhere on car. The engine block must be inside the frame rails. All areas around driver must be padded; conventional steering boxes **must** have knee guards.

15.3.2 All cars must have floorboards and/or belly pans extending from the front firewall to the rear firewall and from frame rail to frame rail. No floor boards under the fuel tank. The firewall must be made of metal at least .032" thick.

15.3.3 Minimum wheelbase is 85 inches. The minimum tread width is 48" to the center of the tire. The maximum width is 85" outside to outside of wheels. All wheels will use all available lugs to secure the wheel. Only aluminum or steel wheels allowed.

15.3.4 Nose, hoods, tailpieces and side panels are mandatory. Bodies must not extend more than 2" outside the frame rail. NO side foils, rudders or panels are to extend beyond the roll cage on any side. NO wedges or foils under the racecar. NO pieces may be added to the frame so as to resemble, imitate or be specifically designed to deflect, trap or from a windbreak of any kind, except those to cool/protect the motor and braking system. Nosepieces may be removed for cooling reasons.

15.3.5 **Side nerfs must be within 1" of normal width of tires.** No nerf bars with added weight allowed. Fuel cell, battery or approved weight ballast must bolt to the frame only with 5/16" minimum bolts. Front and rear bumpers must have a contact point of 18-20" above the ground with rear bumper contact point 6" in height and must not

extend more than 4" past the frame width. NO part or attachment of the car can be wider than the outside of the nerf irons or extend past the rear bumper. No large gussets on bumpers. 15.3.6 No independent suspensions. Any coil over, torsion bar, leaf spring or combinations are allowed. Quick changes are allowed. Adjustable shocks are allowed, rebound only. No external adjustment, external reservoir, or gas charged type shocks allowed. The centerline of the engine block cannot be behind the center of the wheelbase. A maximum of 8 1/2 " of offset measured from the crankshaft centerline to the center of each rear wheel is permitted.

15.3.7 Numbers must be on the nose and tailpieces. They must contrast with the body colors and be large enough for scoring to see.

15.3.8 No rear-view mirrors. No cockpit adjustable suspension allowed. **Must** have a quick release steering wheel.

15.3.9 All ignition switches shall be of a toggle design and mounted in plain sight on the dash on either side of the steering wheel. Ignition, fuel pump and fuel shut off must be labeled and marked in florescent orange or red. **No** switches under the steering wheel.

15.3.10 **Battery:** Securely mounted, dry cell, spiral cell or other non-liquid type battery only.

15.3.11 All cars must have burp tank of 1-gallon capacity. Overflow tube into the exhaust collector is **not recommended**.

15.4 SAFETY

15.4.1 See SECTION 3 MINIMUM SPECIFICATIONS.

15.4.2 All drivers can wear a minimum single layer Nomex uniform with Nomex underwear. May use double/triple layer suit w/no underwear. Nomex gloves, shoes, arm and helmet restraints are required.

15.4.3 **Drivers Seat:** Only aluminum or steel allowed. Must be bolted in to the chassis in 4 places*minimum., 2 on the bottom and 2 on the back near shoulder level. Each mounting hole in the seat must have a minimum 2" Dia/.060 thick reinforcement plate/washer. ALL subject to tech approval.

15.4.4 All throttle pedals must have toe return straps.

15.4.5 During any race or practice, any car that is the instigator of being three wide on the track will be penalized and/or black flagged for the racing event.

15.5 ENGINE GM 350 cid CRATE # 88958602

(all rules subject to Section 5 Protest Procedures)

MS SEAL FEE, \$8.00 per seal used (minimum 1, maximum 2) payable at time of re-seal.

15.5.1 Unaltered and complete General Motors factory sealed crate engine # 88958602.

15.5.2 GM Intake and head seals must be in place to be legal crate motor.

15.5.3 All new or used engines with **factory 602 seals** must be also-sealed by Meridian Speedway prior to first event of the season to avoid teardown or protest. (drill the first two head bolts)

15.5.4 Any rebuilds approved prior to racing season will be subject to approval by MS officials and shall be submitted to MS during the first 3 events of the racing season. Any rebuild shall be sealed by MS official(s) cap seal at intake, first two head bolts with wire/lead seal (competitors shall pre-drill head bolts)

15.5.5 A competitor submitting a rebuilt 602 motor for sealing is declaring that motor legal as per Engine Specifications on Crate Motor and Supplement for Engine Rebuild table published below. That motor shall be logged as "uninspected" and shall be eligible for protest or teardown. If a motor is tore down and found legal, it may be resealed at that time and the seal fee must be paid. Head gaskets and intake gaskets may be replaced at that time, but must be sealed before the tech inspection is concluded.

15.5.6

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| Engine Specifications on Crate Motor and Supplement for Engine Rebuild GRANDFATHERED 2012 engines only | | All internal components and specifications must remain stock as supplied by GM with the following exceptions: Any exceptions must be approved by MS technical |
| ITEM | FACTORY SEALED CRATE 88958602 (untouchec and sealed) | Supplemental (Sealed by MS tech inspector) |
| Block Type | Cast Iron | Cast Iron |
| Casting # | 10243880 or 14093638 | 10243880 or 14093638 |
| Deck Height | 9.025" +/- .001 | 9.015" +/- .001 |
| Crankshaft | Cast Iron 14082586 | Cast Iron 14082586 |
| Crankshaft Weight | 55.30 lbs | 55.30 lbs |
| Maximum / Minimum Crank Stroke | 3.48" | 3.48 |
| Crankshaft Balancing | Factory External | Rear External / Front Internal to #602 spec. |
| Off-Set Grinding of Crank | NONE | NONE |
| Crank Grind | NONE | .010 .020 .030 with tech PRE approval |
| | | |
| Piston Type | Cast Aluminum #123611371 | #123611371 or |
| Diameter | 3.996" - 3.997" | .005" GM # clean-up kit |
| Valve Relief Type | 4 reliefs | 4 reliefs |
| Piston Crown | Dished | Dished |
| Piston Weight | 594 grams | 594 grams |
| Piston Rings | GM# 88894219 / 12507985 | GM# 88894219 / 12507985 or GM .005 |
| Connecting Rod | GM# 1010868 5.7" | or Scat #2-ICR5700p 5.7" (untouched) |
| Connection Rod Weight +/- 10.0 grams | 604 grams | min. 604 grams |
| Minimum Crank or Rod Bearing Size | #602 spec. | .010", .020" or .030" under with pre tech approval (any brand w/no coating |
| | | |
| Camshaft Type | Hyd GM# 24502476 | Hyd GM# 24502476 |
| Camshaft Lift (int / exh measured @ valve) | .435" / .460" | .435" / .460" |
| Camshaft lobe lift (int / exh) | .290" / .306" | .290" / .306" |
| Duration @ .050" (int / exh) | 212 / 222 | 212 / 222 |
| Camshaft Lobe Centerline | 112.5 degrees | 112.5 degrees |
| Camshaft Timing | not a tech issue | not a tech issue |
| Rocker Arm Kit | GM# 12495490 | GM# 12495490 |
| Rocker Arm Type / Ratio | stamped steel 1.5 | stamped steel 1.5 |
| Timing Set | #602 Spec | not a tech issue |
| | | |
| Head Gasket Type | GM #10105117 .028" | or Fel Pro #1003 |
| Cylinder Head Type | Cast Iron / GM# 12558062 | Cast Iron / GM# 12558062 |
| Valve Size | 1.94" / 1.50" | 1.94" / 1.50" |
| Combustion Champer CC's (+/- 2cc) | 64 | 64 |
| Intake Port CC's (+/- 2cc) | 170 | 170 |
| Exhaust Port CC's (+/- 2cc) | 60 | 60 |
| Maximum Deck Surfacing of Head | .005 to Square | Flat cut only must maintain 64cc |
| all other gaskets | GM # | optional |
| Rocker Studs, retainers, valve covers | #602 spec. | not a tech issue |
| Modifications to Crank Rod or Piston | NONE | NONE unless previously specified |
| Distributor | as supplied with #602 no alterations | as Supplied with #602 no alterations |
| Distributor Module | optional (factory appearing) | optional (factory appearing) |
| | | |

15.5.7 If the factory GM seal or the MS seal on a motor doesn't meet the proper specifications, the motor will be disallowed and the points and monies will be taken from the competitor as per the rulebook., **Any other engines not meeting the GM Factory Seal rule will be disallowed. MS may reseal or re-furbish any 602 motor and attach an approved MS seal. Final word and decisions on any seal will be made solely by Meridian Speedway**

15.5.8 Removal of any MS seal or any GM factory intake or head seal shall make that engine ineligible for competition and otherwise illegal for future competition.

15.5.9 Maximum engine roll will be 5 degrees from vertical

15.5.10 No engine modifications will be allowed.

15.5.11 Valve springs, retainers and keepers must remain OEM and their size and installation specifications must remain within OEM spec and may be changed by competitor.

15.5.12 Castings and fittings cannot be changed

15.5.13 No machine work on outside of engine.

15.5.14 No aftermarket engine parts allowed. OEM ONLY (unless otherwise specified).

15.5.15 Flywheels: Aluminum or Steel with stock appearing clutch/pressure plate must be used. Aftermarket is allowed. Clutch must be 10.4" minimum size. Minimum flywheel weight 21.0 lbs.

15.5.16 Sprint car headers with mufflers only. Must meet DB rule in Section 3 this includes spec muffler- Minimum Specifications.

15.5.17 Sprintcar timing cover, water pump and power steering pump may be used if desired.

15.5.18 GM Factory distributor as installed and delivered with 602 crate engine will be required and shall be unaltered with the exception of cap, wires and module.

15.6 TIRES / WHEELS

15.6.1 Class tires must be purchased through Meridian Speedway.

15.6.2 Steel or aluminum wheels are approved.

15.6.3 Race day tires shall be stamped and logged prior to the final practice of the day and/or prior to time trials at the discretion of the tire tech. Stamped tires must be run in all events on raceday with the exception of the Trophy dash if it is not co-mingled with the A-heat, including the final practice if stamping takes place at that time. Tires may be replaced no sooner than (with exception of destruction thereof) every four (4) consecutive races. A "race" is considered only when you compete in all racing activities on that race date.

15.6.4 All tires purchased must be branded to be legal to race.

15.6.5 No tire softening or sipping allowed.

15.6.6 Practice tires may be purchased for practice only.

15.6.7 If any competitor in the top 5 in the current points, destroys a tire during an incident on the track and needs to purchase a replacement, he/she may do so at the discretion of the promoter. If the promoter deems that the replacement tire will give an unfair advantage, the promoter may then approve the whole class to take the option to purchase a new tire for that corner(s) of the car. The new tire will then need to be stamped and run at 4 consecutive races prior to being replaced again.

This tire stamp rule may be altered should it be deemed necessary to comply with the any co-sanctioned events.

15.6.8 Tire Sizes Allowed:

15.6.8.1 Right front tire: AR ~ 24.0/11.0 -15

15.6.8.2 Left front tire: AR ~ 23.5/10.0 -15

15.6.8.3 Left rear tire: AR ~ 25.5/13.5 -15

15.6.8.4 Left rear tire: AR ~ 26.0/13.5 -15

15.6.8.5 Right rear tire: AR ~ AR ~ 27.5/17-15

15.6.9 All tires and tire rotations will stay with the car/owner. If there is a driver change, tires stay with the car.

15.6.10 RF, LR and RR tires must be used/stamped at a minimum of four race events before a new replacement is approved for competition. LF will not require any stamping or monitoring

15.6.11 no rubber or tire softening agents allowed

15.6.12 Tires must be branded/stamped to be legal to race

15.7 QUALIFYING - For racing events, scratch will be determined by 1 second off quickest time in qualifying. 1 second of the 2nd quickest time in qualifying may be used if deemed necessary.